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(12) United States Patent Brady

(54) HIGH RESOLUTION MODULAR HEATING FOR SOIL EVAPORATIVE DESORPTION

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- (58) Field of Classification Search CPC B09C 1/06; B09C 1/005; F23G 7/14 See application file for complete search history.

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(57) ABSTRACT

Disclosed is a method and a system of high resolution modular heating for soil evaporative desorption. In one embodiment, a soil box comprising contaminated soil is mounted within a treatment chamber. Heated gas are directed into the soil box through a plurality of injection ports. A heat front from the heated gas desorbs the surrounding contaminated soil. The delivery of the heated gas may be in sections and independently controlled among the plurality of injection ports. A bottom section of the soil box is heated prior to a top section to minimize or reduce condensation formation within lower areas of the soil box, thereby creating roadways of desiccated, heated, and/or cracked soil at the bottom section. Vaporized contaminants from the top section is able to flow freely through the roadways to get to an exit pathway at the bottom of the soil box.

15 Claims, 18 Drawing Sheets

